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# Vending Machines (Coin-Operated)

1985

MA35U(85)-1
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U.S. Department of Commerce
BUREAU OF THE CENSUS

## SUMMARY OF FINDINGS

In 1985, manufacturers' shipments of coin-operated vending machines totaled $429 million, an increase of 8 percent from the 1984 figure of $394 million. Vending machines for beverages totaled $292 million in 1985, an increase of 11 percent from the 1984 figure of $263 million. Vending machines for confections and foods totaled $106 million, an increase of 15 percent from the 1984 figure of $92 million. All other vending machines totaled $31 million in 1985, a decrease of 26 percent from the 1984 figure of $39 million. A description of the survey methodology and related information appears on page 4.

Table 1A. VALUE OF SHIPMENTS OF COIN-OPERATED VENDING MACHINES: 1975 TO 1985

(Millions of dollars)

| Year | MA35U | Annual Survey of Manufactures | Census of Manufactures |
|---|---|---|---|
| 1985 | 428.5 | (NA) | (X) |
| 1984 | 394.4 | 391.1 | (X) |
| 1983 | 334.4 | 550.8 | (X) |
| 1982 | 318.9 | (X) | 334.1 |
| 1981 | 338.3 | 372.3 | (X) |
| 1980 | 327.7 | 339.7 | (X) |
| 1979 | 361.5 | 366.7 | (X) |
| 1978 | 348.9 | 347.6 | (X) |
| 1977 | 302.2 | (X) | 294.9 |
| 1976 | 226.9 | 215.3 | (X) |
| 1975 | 168.4 | 149.8 | (X) |

(NA) Not available. (X) Not applicable.

C 3,158:

Address inquiries concerning these figures to U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233, or call Pamela Glekas. (301) 763-2529.
For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Table 1B. COMPARISON OF VALUES OF SHIPMENTS OF AUTOMATIC MERCHANDISING MACHINES, AS REPORTED IN THE MA35U, THE 1984 ANNUAL SURVEY OF MANUFACTURES, AND THE 1982 CENSUS OF MANUFACTURES

(Value in thousands of dollars)

| Product code | Product description | 1984 | | | 1982 | |
|---|---|---|---|---|---|---|
| | | | Annual Survey of Manufactures | | | |
| | | MA35U | Value | Standard error of estimates[1] | MA35U | Census of Manufactures |
| 3581 | Automatic merchandising machines | (X) | 550.5 | (NA) | (X) | 445.7 |
| 35811 | Automatic merchandising machines, coin-operated (vending), excluding parts | 394.4 | 391.1 | 0.6 | 318.9 | 334.1 |
| 35812 | Coin-operated mechanisms and other parts for automatic merchandising machines | | | | | 96.2 |
| 35812 51 | Coin-operated mechanisms (for sale separately) | | | | | 60.5 |
| 35812 69 | Parts for automatic merchandising machines, except coin-operated mechanisms | (2) | 143.0 | 0.8 | | 35.3 |
| 35812 00 | Coin-operated mechanisms and other parts for automatic merchandising machines n.s.k. | | | | (2) | 0.4 |
| 35810 00 | Automatic merchandising machines n.s.k., typically for establishments with 10 employees or more (see note) | (2) | 16.4 | 6.4 | | 4.1 |
| 35810 02 | Automatic merchandising machines n.s.k., typically for establishments with less than 10 employees (see note) | | | - | | 11.4 |

Note: In the 1982 Census of Manufactures, shipments data for establishments of small companies, typically those with fewer than ten employees, were estimated from administrative records data rather than collected on census questionnaires. These shipments are included in product code 35810 02. Products not adequately identified by detail product were coded to the appropriate product class (five-digits) followed by "00," or in some cases to the appropriate industry (four-digits) followed by "000."

(NA) Not available. N.s.k. Not specified by kind. (X) Not applicable. CIR MA35U does not include coin-operated mechanisms and other parts for automatic merchandising machines.

[1] The annual survey of manufactures percentage standard errors shown are the approximate relative errors of the estimates of level. A more detailed description of the standard error of estimate is given in the introduction of the annual survey of manufactures, Value of Product Shipments, M84(AS)-2, under "Qualifications of the Data."

[2] Available only from the annual survey of manufactures and 1982 Census of Manufactures. Most of these data are derived from administrative records.

Table 2. QUANTITY AND VALUE OF SHIPMENTS OF COIN-OPERATED VENDING MACHINES: 1985 AND 1984

(Quantity in number of units; value in thousands of dollars)

| Product code | Product description | Number of companies | 1985 | | 1984[1] | |
|---|---|---|---|---|---|---|
| | | | Quantity | Value | Quantity | Value |
| | Coin-operated vending machines | 45 | 561,117 | 428,518 | 525,177 | 394,381 |
| | Beverage vending machines | 17 | 232,348 | 291,613 | 216,416 | 263,317 |
| | Hot beverage:[2] | | | | | |
| | Instant freeze-dried or liquid concentrate: | | | | | |
| 35811 01 | Nonoffice type | 3 | 4,208 | 4,674 | r4,979 | r5,870 |
| 35811 03 | Office type | 3 | | | | |
| 35811 04 | Fresh brew, coffee, and combinations | 7 | 10,360 | 22,308 | 9,331 | 20,806 |
| | Soft drink: | | | | | |
| 35811 05 | Canned beverage (refrigerated) vending machines[3] | 6 | 204,147 | 230,864 | 183,528 | 197,691 |
| 35811 07 | Bottle vending machines[4] | 2 | | | | |
| 35811 09 | Cup (postmix) | 5 | (D) | (D) | (D) | (D) |
| 35811 06 | Package milk and juice (indoor) | 6 | 4,269 | 6,755 | 8,459 | 10,363 |
| 35811 19 | Other vending machines for beverages[5] | 2 | (D) | (D) | (D) | (D) |
| | Confections and food vending machines | 14 | 151,002 | 105,847 | 116,433 | 92,047 |
| 35811 21 | Bulk confection and charms | 4 | 97,809 | 4,780 | 65,511 | 3,289 |
| 35811 22 | Candy bar, cookie, and cracker | 7 | 9,423 | 9,748 | 9,617 | 9,615 |
| 35811 23 | Hot canned food and soup | 4 | 1,136 | 2,778 | 1,323 | 2,915 |
| 35811 24 | Ice cream and frozen ices | 3 | | | | |
| 35811 25 | Multipurpose food and confections | 4 | (6) | (6) | (6) | (6) |
| 35811 27 | Pastry | 3 | (6) | (6) | (6) | (6) |
| 35811 28 | Bagged snack/chip | 6 | 36,681 | 64,801 | 32,919 | 49,757 |
| 35811 29 | Other vending machines for confections and foods, including bulk popcorn | 2 | 6 5,953 | 6 23,740 | 6 7,063 | 6 26,471 |
| | Other vending machines | 30 | 177,767 | 31,058 | r192,328 | 39,017 |
| 35811 31 | Cigarettes | 6 | 7,488 | 7,747 | 9,105 | 8,574 |
| 35811 32 | Water and ice in bulk | 1 | (D) | (D) | (D) | (D) |
| 35811 33 | Ice, prebagged | 3 | | | | |
| 35811 35 | Postage stamp | 5 | 3,003 | 413 | 5,761 | 1,576 |
| 35811 49 | All other vending machines except for beverages, confection, and foods[7] | 20 | 167,064 | 22,012 | r177,067 | r27,581 |

(D) Data withheld to avoid disclosing figures for individual companies. rRevised by 5 percent or more from previously published figures.

[1]Data for quantity and value in 1984 for some product lines have been revised based on changes as reported from respondent company data and thus are reflected in 1985 quantity and value data. These changes do not affect 1983 data.

[2]These are primarily coffee vending machines though they may also vend hot chocolate and/or hot soup from the same cabinet.

[3]Some vending machines designed and sold to handle canned beverages are also adaptable to bottled soft drinks through the use of a conversion kit.

[4]Some vending machines designed and sold to handle bottled soft drinks are also adaptable to canned beverages through the use of a conversion kit.

[5]Includes machines such as milk in quart and half-gallon containers and packaged dry ingredients for mixing into beverages, etc.

[6]Vending machines for multipurpose food and confections are included with code 35811 29, other vending machines for confections and foods.

[7]Includes vending machines for such products as aspirin, cigars, combs, cosmetics, pencils, paper, and newspapers. Included are multipurpose machines for nonfood and nonbeverage items.

Table 3. SHIPMENTS, EXPORTS, AND IMPORTS OF VENDING MACHINES: 1983 TO 1985

(Quantity in number of units; value in thousands of dollars)

| Product description | 1985 | | 1984 | | 1983 | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Manufacturers' shipments | 561,117 | 428,518 | 525,367 | 394,381 | 603,528 | 334,384 |
| Exports of automatic vending machines[1] | 20,379 | 20,812 | 18,622 | 20,153 | 19,059 | 20,251 |
| Estimated producer's value[2] | (X) | 2 17,085 | (X) | 2 17,646 | (X) | 2 17,732 |
| Percent, exports to manufacturers' shipments | 4 | 4 | 3 | 4 | 3 | 5 |
| Imports of automatic vending machines[3] | (NA) | 4 28,461 | (NA) | 4 22,340 | (NA) | 4 10,218 |
| Apparent consumption[5] | (NA) | 439,894 | (NA) | 399,075 | (NA) | 326,870 |
| Percent, imports to apparent consumption | (NA) | 6 | (NA) | 5 | (NA) | 3 |

(NA) Not available. (X) Not applicable.

[1]Source: Bureau of the Census report EM 546, U.S. Exports. Schedule B export number for automatic merchandising machines, coin-operated, new is 678.4012.

[2]These values were derived by use of adjustment factors to exclude freight, insurance, and other charges incurred in moving goods to the port of export. This adjustment is made to convert the values to an approximation of the producers' value of exported goods. Current adjustment factors are based on data for 1981 which are published in Origin of Exports of Manufactured Products, M81(AS)-5, appendix B. The adjustment factor for this report is 0.8209.

[3]Source: Bureau of Census report IM 145-X, U.S. Imports for Consumption and General Imports.

[4]This dollar value represents the c.i.f. (cost, insurance, and freight) value at the first port of entry in the United States plus import duties.

[5]Apparent consumption is derived by subtracting exports from the total of manufacturers' shipments plus imports.

## DESCRIPTION OF SURVEY

**Scope of Survey**. This survey covers manufacturers of coin-operated vending machines in the United States.

**Survey Methodology**. The statistics in this publication were collected by mail on Bureau of the Census annual Form MA35U, Vending Machines (Coin-Operated). The survey panel includes all known manufacturers of coin-operated vending machines, approximately 45 companies.

**Reliability of Data**. Survey error may result from several sources: (1) inability to obtain information about all cases in the survey; (2) response errors; (3) definitional difficulties; (4) differences in the interpretation of questions; (5) mistakes in recording or coding the data obtained; and (6) other errors of collection, response, coverage, and estimation for missing data. These nonsampling errors also occur in complete censuses. Although no direct measurement of the biases due to nonsampling errors has been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize their influence.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail logic edits. Missing figures are imputed based on yearly movements shown by reporting firms. Imputation generally is limited to a maximum of 10 percent for any one data cell. Figures with imputation rates greater than 10 percent are footnoted.

The imputation rate is not an explicit indicator of the potential error in published figures due to nonresponse, because the actual yearly movements for nonrespondents may or may not closely agree with the imputed movements. The range of difference between the actual and imputed figures is not precisely known but is assumed to be small. The degree of uncertainty regarding the accuracy of the published data, however, increases as the percentage of imputation increases. Figures with imputation rates above 10 percent should be used with caution.

**Revisions to Previous Period Data**. Statistics for previous years may be revised as the result of corrected data from respondents, late reports for which imputations were made as described above, or other corrections. Figures which have been revised by more than 5 percent from previously published figures are indicated by footnotes.

Revisions include changes to prior period data resulting from reconciliation of the results of this survey with the 1984 Annual Survey of Manufactures to correct differences in reported data between the two series and to identify and verify new establishments included in the scope of this survey. Table 1B presents a comparison of data from the two series by census product class following the reconciliation.

**Adjustment for Price Change**. All dollar figures included in this publication are in current dollars; i.e., they have not been adjusted for price change.

## EXPLANATION OF TERMS

*Quantity and Value of Shipments.* The figures on quantity and value of shipments represent physical shipments of all products sold, transferred to other establishments of the same company, or shipped on consignment, whether for domestic or export sale. The value represents the net sales price, f.o.b. plant, to the customer or branch to which the products are shipped, net of discounts, allowances, freight charges, and returns. Shipments to a company's own branches are assigned the same value as comparable sales to unaffiliated customers; i.e., the value includes an appropriate allocation of company overhead and profit. Products bought and resold without further manufacture are excluded.

*Hot Beverages, Office Type (Brewed, Freeze-Dried, or Instant Coffee).* Small, usually table-top venders with or without chocolate or hot water options.

*Coffee, Fresh-Brew (Single Cup).* Brewed coffee venders with optional chocolate, soup, tea, and decaffeinated coffee.

*Soft Drink, Canned (Refrigerated).* Canned soft drinks in all can containers sizes.

*Soft Drink, Bottle.* Bottled soft drinks in all glass package sizes.

*Soft Drink, Cup.* Postmix soft drinks. These machines may include automatic ice-making equipment incorporated into the machine.

*Packaged Milk and Juices.* Milk and flavored milk products in half-pint, one-third quart, and pint glass or paper containers, canned fruit, and vegetable juices.

*Other Vending Machines for Beverages.* All beverage vending machines not included above, such as milk in quart or half-gallon containers, packaged dry ingredients for mixing into beverages, etc.

*Bulk.* Bulk confections such as candy, peanuts, single wrapped sticks of gum, ball gum, capsules, trinkets, etc.

*Candy Bar.* Candy bar machines or combination machines selling candy bars, cookies, crackers, and packaged gum.

*Hot Canned Food and Hot Canned Soup.* Hot canned foods and hot canned soups.

*Ice Cream.* Ice cream novelties such as cones, bars, and sandwiches (except packaged bulk ice cream).

*Multipurpose.* Varieties of different sized and packaged confections and foods (including packaged ice cream products), whether sold frozen, refrigerated, nonrefrigerated, at room temperature, hot, or under any combinations of temperatures.

*Pastry.* Principally pastry.

*Bagged Snack/Chip.* Bagged chips, snacks, and confections.

*Other Vending Machines for Confections and Foods.* Machines not classified above, such as bulk popcorn.

*Cigarettes.* Cigarettes (single packs only).

*Water and Ice in Bulk.* Machines for filtering/treating water or for manufacturing/dispensing edible ice.

*Ice, Prebagged.* Ice bagged when dispensed.

*Postage Stamp.* U.S. postage stamps and other types of stamps.

*All Other Coin-Operated Vending Machines.* Aspirin, cigars, combs, cosmetics, pencils, paper, newpapers, etc. Included are multipurpose machines for nonfood and nonbeverage items.

## COMPARISON OF EXPORT, IMPORT, AND DOMESTIC OUTPUT DATA

The Standard Industrial Classification (SIC) system used for domestic output and the statistical export and import commodity classifications were developed independently. This results in considerable difficulty in comparing the three types of data for many commodity areas. The domestic output classification is based on type of industry; on the other hand, the export and import classification system is more materials oriented. Also, there are a substantial number of imported commodities which have no comparable domestic output classification. The relationships shown in this report should be considered only as approximations, since, in addition to the problems mentioned above, there are also the following problems affecting the comparability of the three sets of data.

**Valuation.** There are different methods of valuation for the three types of data:

- *Domestic Output*—Valued at the point of production. It includes the net sales price, f.o.b. plant, after discounts and allowances, exclusive of freight charges and excise taxes.

- Exports—Valued at the point of exportation. It includes the selling price, or cost if not sold, and inland freight, insurance and other charges to the export point.
  Estimated producers' values of exports have also been developed. These values more closely approximate the values reported for domestic output because they exclude freight, insurance, and other charges applied from the producing plant to the export point.

- Imports—Valued at the first port of entry in the United States. It includes c.i.f. (cost, insurance, and freight), duty, and other charges to the import point.

**Duplication in Quantity and Value of Output.** Because producers' shipments of some commodities may be used as materials for incorporation into other commodities, combinations of data for such commodities may contain a certain amount of duplication. Thus, percentages of exports to output or imports to apparent consumption (output plus imports minus exports) at four-digit or broader levels may be understated. Where duplication is known to be substantial, the output data are appropriately noted in the table.

**Low-Value Export and Import Transactions.** Detailed commodity information is not included for individual export shipments valued at not more than $1,000. Generally, detailed commodity information is not included for individual import shipments valued at not more than $1,000. For textiles and textile products, gloves, footwear, and miscellaneous rubber and plastics products, detailed commodity information is not included for individual import shipments valued at not more than $250. This is believed to have only negligible effects on the statistics for the bulk of the commodities.

**Manufacturers' Shipments, Not Specified by Kind.** The value of manufacturers' shipments at the four-digit industry level often includes a small amount which is not distributed among the individual five-digit product classes. Export and import percentages at the more detailed levels might, therefore, be slightly overstated.

**Time Lag Between Output and Exports.** There will be a lag between the time a commodity is produced or shipped by the producer and the time it is actually exported, especially when intermediaries (wholesalers, exporters, etc.) are involved. Ordinarily, this type of discrepancy is insignificant in annual figures.

**"Direct" vs "Total" Commodity Exports and Imports.** Export and import data do not include materials which are incorporated into other more finished products and exported or imported in finished form. Thus, by showing only direct exports and imports, the relation of exports to output and imports to apparent consumption for intermediate products is considerably understated.

**Used Commodities.** With a few exceptions, used or rebuilt commodities are classified in the same import or export codes as is new merchandise. Percentages are thus overstated to the extent that used or rebuilt products are significant in trade.

**Geographic Area of Coverage.** Import and export data reflect the movement of merchandise into and out of U.S. foreign trade zones, the U.S. Virgin Islands, and the U.S. customs territory (includes the 50 States, the District of Columbia, and Puerto Rico).

## HISTORICAL NOTE

Data on coin-operated vending machines have been collected by the Bureau of the Census since 1955. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. A list of depository libraries may be obtained from the Bureau of the Census regional offices cited below:

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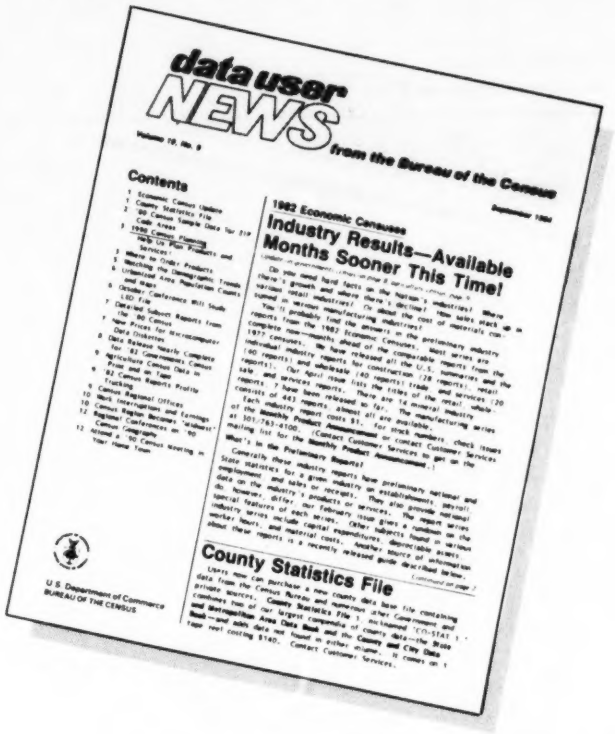
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